



Mark Scheme (Results)

January 2022

Pearson BTEC Nationals
in IT (31760H)

Unit 1: Information Technology Systems

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Unit 1: Information Technology Systems

General marking guidance

- All learners must receive the same treatment. Examiners must mark the first learner in exactly the same way as they mark the last.
- Mark grids should be applied positively. Learners must be rewarded for what they have shown they can do rather than be penalised for omissions.
- Examiners should mark according to the mark grid, not according to their perception of where the grade boundaries may lie.
- All marks on the mark grid should be used appropriately.
- All the marks on the mark grid are designed to be awarded. Examiners should always award full marks if deserved. Examiners should also be prepared to award zero marks, if the learner's response is not rewardable according to the mark grid.
- Where judgement is required, a mark grid will provide the principles by which marks will be awarded.
- When examiners are in doubt regarding the application of the mark grid to a learner's response, a senior examiner should be consulted.

Specific marking guidance

The mark grids have been designed to assess learners' work holistically.

Rows in the grids identify the assessment focus/outcome being targeted. When using a mark grid, the 'best fit' approach should be used.

- Examiners should first make a holistic judgement on which band most closely matches the learner's response and place it within that band. Learners will be placed in the band that best describes their answer.
- The mark awarded within the band will be decided based on the quality of the answer in response to the assessment focus/outcome and will be modified according to how securely all bullet points are displayed at that band.
- Marks will be awarded towards the top or bottom of that band depending on how they have evidenced each of the descriptor bullet points.

Question Number	Answer	Mark
1ai	<p>One mark for each of:</p> <p>Memory card / SD (1) 256 GB SSD (1) Flash memory device / Flash drive / memory stick / pen drive (1) External hard drive / portable hard drive (1) Online / cloud storage (1)</p> <p>Do Not Accept: USB or External storage device on their own</p> <p>Accept any other relevant phrasing/wording</p>	2

Question Number	Answer	Mark
1aai	<p>Award up to two marks for each of two linked explanations, such as:</p> <ul style="list-style-type: none"> • Majority of/many modern-day devices do not have a DVD drive (1) restricting sharing with clients (1) • Limited storage capacity (9.4 GB) (1) which would be unsuitable for storing large/image files (1) • DVDs are easily damaged / lost (1) which results in data loss /corruption/ can't be read / and would result in having to make another copy (1) • Time consuming (1) takes a while to burn images onto a DVD which takes longer (compared to online methods) (1) • Cost implications of using DVDs (1) she will need to pay postage to send copies rather than using online systems (1) <p>Accept any other relevant phrasing/wording</p>	4

Question Number	Answer	Mark
1bi	<p>Award up to two marks for each of two linked explanations, such as:</p> <p>Can share peripherals e.g., printers (1) which reduces purchase costs/better for the environment (1)</p> <p>Can share files / software applications between devices (1) without the need to use 'external' methods e.g., email / external storage devices (1)</p> <p>Improved security (1) because it is centralised (1)</p> <p>Can connect mobile devices to the internet via the LAN (1) reducing the need for cellular data (1)</p> <p>Accept any other relevant phrasing/wording</p> <p>Do not accept: 'Firewall' on its own</p>	4

Question Number	Answer	Mark
1bii	<p>Award up to two marks for each of two linked explanations, such as:</p> <p>Set up access levels / separate user accounts (usernames and passwords) (1) so individual family members are restricted from accessing Hazel's user area (1)</p> <p>Password protect files/data (1) so that unauthorised users cannot open/access client files / only Hazel can open/access them (1)</p> <p>Encrypt files (1) so that only Hazel can decrypt them / keys (1)</p> <p>Do not accept: 'Password' on its own</p> <p>Accept any other relevant phrasing/wording</p>	4

Question Number	Answer	Mark
1c	<p>Award up to two marks for each of two linked explanations, such as:</p> <p>She may be concerned that IT support will access confidential material (1) which will breach Data Protection Legislation / client confidentiality (1)</p> <p>Concerned that the connection is insecure (1) so that outside factors can (intercept data transmission) (1)</p> <p>Fear of the IT technician making a mistake (1) which could result in loss of data / accidental damage (1)</p> <p>Concerned that IT support add malware/tracking software (1) that will corrupt/delete/steal the data (1)</p> <p>(Privacy) access apps on the laptop, e.g., camera (1) which may allow them to see/hear Hazel (1)</p> <p>Do not accept: 'Hackers' on its own</p> <p>Accept any other relevant phrasing/wording</p>	4

Question Number	Answer
1d	<p>Answers will be credited according to the learner's demonstration of knowledge and understanding of the material, using the indicative content and level descriptors below. The indicative content that follows is not prescriptive. Answers may cover some/all of the indicative content but should be rewarded for other relevant answers.</p> <p>Learners discuss the characteristics of the two internal storage devices</p> <p><u>Portability factors</u></p> <ul style="list-style-type: none"> Size / bulkiness /weight SSDs use a system of interconnected flash memory chips that can be built on to the motherboard/main board making it compact. HDDs use spinning platters and read/write heads etc limiting how small they can be manufactured. HDD are much heavier than SSDs Robustness An SSD is flash storage which has no moving parts making it more robust /data is unharmed if device is knocked/dropped when in use. HDDs use spinning platters and read/write heads which will be damaged if devices is knocked/dropped when in use Power consumption SSD uses less power than HDD leading to a longer battery, as read/write operations do not require the system to run motors to drive HDD spindles, read heads, etc. life <p><u>Speed</u></p> <p>An SSD is faster than a HDD, which would be very important when processing images.</p> <p><u>Storage space</u></p> <p>1 TB is far larger than 256 GB which would make it far superior in storing large image files such as photos.</p> <p><u>Cost</u></p> <p>SSD is much more expensive to buy than HDD. Consequently, SSDs are not manufactured with large storage.</p> <p><u>Conclusion</u> (not essential for marks)</p> <p>Hazel should weigh up the benefits of portability and speed v storage before reaching a conclusion.</p>

Mark scheme (award up to 6 marks) refer to the guidance on the cover of this document for how to apply levels-based mark schemes*.

Level	Mark	Descriptor
Level 0	0	No rewardable material.
Level 1	1-2	<ul style="list-style-type: none"> • Demonstrates isolated elements of knowledge and understanding • There will be major gaps or omissions • Few of the points made will be expanded • Limited discussion which contains generic points • Little or no consideration of different aspects
Level 2	3-4	<ul style="list-style-type: none"> • Demonstrates some accurate knowledge and understanding • There will be some gaps or omissions • Some of the points made will be relevant to the context in the question, but the link will not always be clear • Displays a partially developed discussion which considers some different aspects • There will be some consideration of how they interrelate
Level 3	5-6	<ul style="list-style-type: none"> • Demonstrates mostly accurate and detailed knowledge and understanding • There will be minor gaps or omissions • Most of the points made will be relevant to the context in the question, and there will be clear links • Displays a well-developed and logical discussion which clearly considers a range of different aspects • Clearly shows how they interrelate

Question Number	Answer	Mark
2ai	<p>Award up to a maximum two marks for a linked description of each term</p> <p>Bandwidth Amount of data transferred/transmitted (1) (From one point to another) in a period of time (1) Measured in mega/bits per second (1)</p> <p>Latency Time delay / lag experienced (1) Before a component responds to an instruction (1) Measured in milliseconds (1)</p> <p>Accept any other relevant phrasing/wording</p>	4

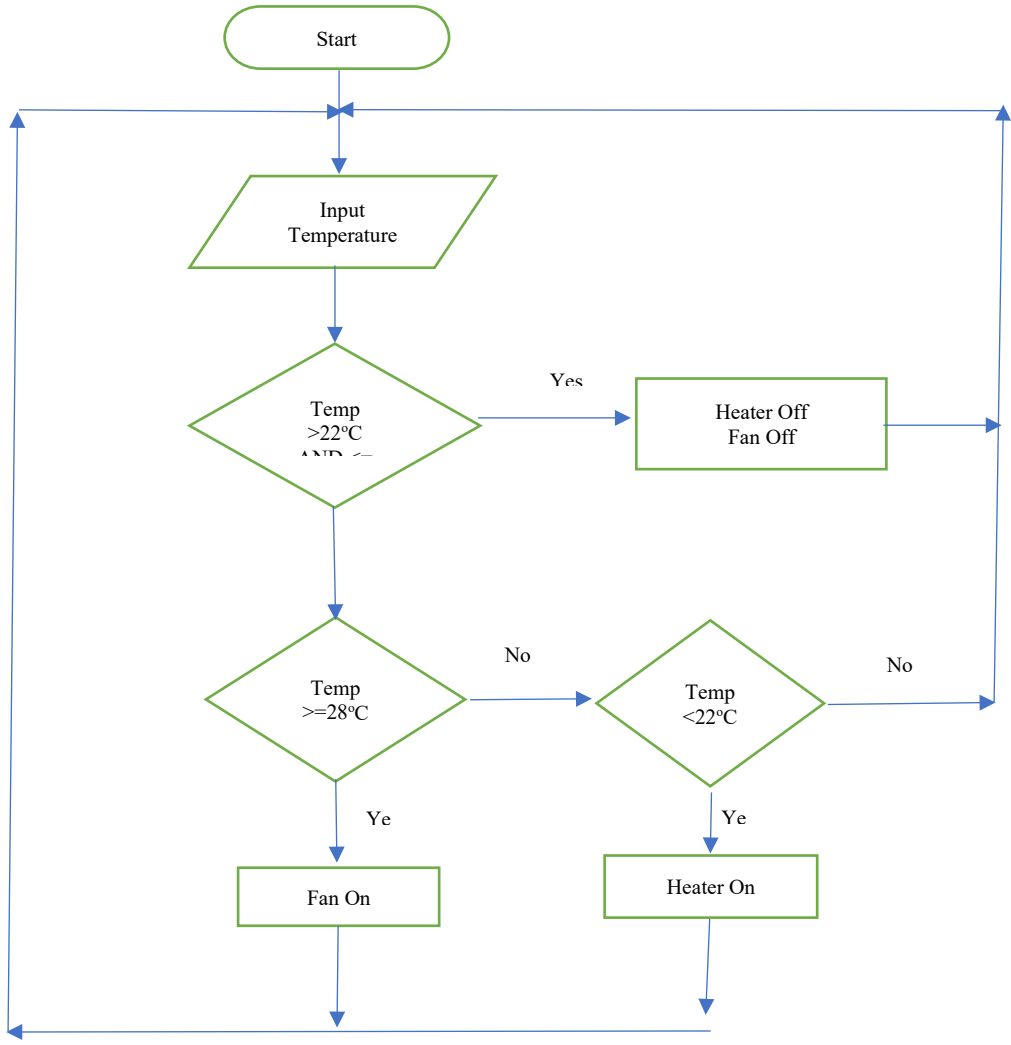
Question Number	Answer	Mark
2a ii	<p>Award up to two marks for each of two linked explanations, such as:</p> <p>Amount of contention / number of other users (1) <u>Bandwidth</u>: at peak times such as early morning when many users are logging on to check emails (1)</p> <p><u>Latency</u>: network devices may have to queue users/resend packets due to collisions/may not be able to respond to all the connection requests (1)</p> <p>Amount of data being transmitted on the network (1) <u>Bandwidth</u>: more users simultaneously transmitting data will be 'sharing' the connection (1)</p> <p><u>Latency</u>: network devices may have to resend packets due to collisions/ receiving devices may take longer to process extra requests (1)</p> <p>Type of connection being used (1) <u>Bandwidth</u>: e.g., a wired connection (is generally faster) generally has a higher bandwidth than wireless connection (1)</p> <p><u>Latency</u>: some connection types require transmissions. e.g., Wi-Fi needs cable - wireless - cable. These changes take time. (1)</p> <p>Distance from the nearest telecommunication exchange / network link (1) <u>Bandwidth</u>: bandwidth reduces over distance / gets weaker (1)</p> <p><u>Latency</u>: signal takes longer to cover a greater distance and must travel at least as far as the nearest network (1)</p> <p>Do not accept: 'Internet' from the network link/distance</p> <p>Accept any other relevant phrasing/wording</p>	4

Question Number	Answer	Mark
2aiii	<p>Award up to two marks for each of two linked explanations, such as:</p> <p>It incorporates/uses Transport Layer Security protocol (TLS), (allow SSL) (1) which provides extra layers of protection/encryption (1)</p> <p>When a browser connects to a site, it checks that the site's (TSL/SSL) certificate is valid (1) if the site fails the check the browser displays a warning / alerting the user that the site is not secure (1)</p> <p>When a browser connects to a site it asks for a public key (1) it uses the public key to produce a session/new key for the connection (1)</p> <p>The browser/client negotiates keys with the server (1) creating a shared (symmetric) key for the connection (1)</p> <p>Do not accept: Explanations about encryption and how it works</p> <p>Accept any other relevant phrasing/wording</p>	4

Question Number	Answer
2b	<p>Answers will be credited according to the learner's demonstration of knowledge and understanding of the material, using the indicative content and level descriptors below. The indicative content that follows is not prescriptive. Answers may cover some/all of the indicative content but should be rewarded for other relevant answers.</p> <p>Learners discuss the guidance that should be given to staff on the acceptable use of IT.</p> <p><u>Password setting and protection</u></p> <ul style="list-style-type: none"> • do not write down • strong password • do not share <p><u>Privacy</u></p> <ul style="list-style-type: none"> • where portable devices such as phones are used and what is being said to avoid eavesdropping/passing on of private/sensitive data • who can see computer screen - switch off monitor/put machine into sleep mode when not using/ moved away from PC • who can see contents of documents/emails etc • privacy policies of websites <p><u>Environmental</u></p> <ul style="list-style-type: none"> • 'think before you print' – only print out what is essential, saving both paper and energy • switch devices off or into sleep mode when not in use • set power saving features • ensure that 'redundant' materials are correctly recycled/disposed of e.g. printer cartridges, can they be refilled <p><u>Online behaviour and netiquette</u></p> <ul style="list-style-type: none"> • treating others with respect e.g. using appropriate language • using professionalism when dealing with others • only visit trusted websites <p><u>Malware and phishing</u></p> <ul style="list-style-type: none"> • Do not open emails attachments from unknown senders • Beware of phishing emails • Do not open links in emails from unknown senders <p><u>Social media</u></p> <ul style="list-style-type: none"> • Time restrictions • Content <p><u>Acceptable Use</u></p> <ul style="list-style-type: none"> • 'cover all' of other features which staff will need to agree to before using IT systems • gives staff awareness of sanctions that can be applied if staff transgress

Mark scheme (award up to 6 marks) refer to the guidance on the cover of this document for how to apply levels-based mark schemes*.

Level	Mark	Descriptor
Level 0	0	No rewardable material.
Level 1	1–2	<ul style="list-style-type: none"> • Demonstrates isolated elements of knowledge and understanding • There will be major gaps or omissions • Few of the points made will be relevant to the context in the question • Limited discussion which contains generic points • Little or no consideration of different aspects
Level 2	3–4	<ul style="list-style-type: none"> • Demonstrates some accurate knowledge and understanding • There will be some gaps or omissions • Some of the points made will be relevant to the context in the question, but the link will not always be clear • Displays a partially developed discussion which considers some different aspects • There will be some consideration of how they interrelate
Level 3	5–6	<ul style="list-style-type: none"> • Demonstrates mostly accurate and detailed knowledge and understanding • There will be minor gaps or omissions • Most of the points made will be relevant to the context in the question, and there will be clear links • Displays a well-developed and logical discussion which clearly considers a range of different aspects • Clearly shows how they interrelate

Question Number	Indicative content
3a	<p>A flow chart OR diagram showing the process of controlling the temperature in a van, with the given parameters.</p> <p>Candidates do not need to use any standard symbols or conventions. Candidates not to be penalised for drawing a diagram rather than flow chart.</p> <p>Credit should be given for a diagram / flow chart that meets the requirements of the given problem.</p> <p>Example response – note this is indicative only.</p> <p>Flow chart should include logic for:</p> <ul style="list-style-type: none"> • Temperature $<22^{\circ}\text{C}$ heater is turned on • Temperature $\geq 28^{\circ}\text{C}$ fan is turned on • Temperature $\geq 22^{\circ}\text{C}$ AND $<28^{\circ}\text{C}$ heater AND fan off  <pre> graph TD Start([Start]) --> Input[/Input Temperature/] Input --> D1{Temp >22°C AND <28°C} D1 -- Yes --> A1[Heater Off Fan Off] D1 -- No --> D2{Temp >=28°C} D2 -- Yes --> A2[Fan On] D2 -- No --> D3{Temp <22°C} D3 -- Yes --> A3[Heater On] A1 --> Input A2 --> Input A3 --> Input </pre>

Level	Descriptor
0 0 marks	No rewardable material
1-2 marks	Diagram provides partial coverage of appropriate decisions and shows some logical structure to meet the requirements of the scenario. Diagram includes annotations to show the results of decision making.
3-4 marks	Diagram provides coverage of mostly appropriate decisions and logical structure to meet the majority of the requirements of the scenario, but the structure may not be the most efficient. Diagram includes accurate annotations and technical language to show the results of decision making.
5-6 marks	Diagram provides thorough coverage of appropriate decisions and logical structure to fully meet the requirements of the scenario. Diagram includes accurate annotations and technical language to accurately represent an efficient system

Question Number	Answer	Mark
3bi	<p>Award one mark for each point up to a maximum of four marks.</p> <ul style="list-style-type: none"> • Receiver in van (1) • Uses GPS (Global Positioning System) / Global Navigation Satellite System (GLONASS) (1) • Uses (multiple) satellites (1) • Receives signals (from satellites) (1) • Continually adjusts/shows position on screen in real time (1) <p>Do not accept 'identifies location'.</p> <p>Accept 'satellite system' as being multiple satellites</p> <p>Accept any other valid response.</p>	4

Question Number	Answer	Mark
3bii	<p>Award one mark for each point up to a maximum of four marks.</p> <p>provides driver with:</p> <ul style="list-style-type: none"> • a variety of routes to follow e.g. shortest/most direct/avoiding motorways/avoiding city centres etc (1) • up-to-date information, e.g., traffic, accidents road works, speed limits/cameras, current location (1) • turn-by-turn verbal instructions (1) • petrol stations and other facilities close to current location (1) • estimated journey times (1) • recalculate / change route (1) • multi-point route calculation taking account of delivery locations (1) • holds stored routes • save re-entering data (1) <p>Do not accept: driver is exceeding the speed limit</p> <p>Accept any other valid response.</p>	4

Question Number	Answer
3c	<p>Answers will be credited according to the learner's demonstration of knowledge and understanding of the material, using the indicative content and level descriptors below. The indicative content that follows is not prescriptive. Answers may cover some/all of the indicative content but should be rewarded for other relevant answers.</p> <p>Learners discuss the features of a GUI that make it the most appropriate type of interface for a navigation system.</p> <p><u>General points</u></p> <ul style="list-style-type: none"> • intuitive / easy to understand/use. • commonly used in digital devices used by non-IT experts, with limited IT skills / programming knowledge • Visually appealing design • Users can quickly and easily navigate to and from multiple options • users can adapt the user interface to suit their individual needs <p><u>Specific points in relation to navigation system</u></p> <p>Whilst stationary / or a passenger:</p> <ul style="list-style-type: none"> • More interactive / Driver will be able to touch icons to swiftly move through the functions • Rotate maps easily • The touchscreen interface provides both input and output which is appropriate for a dashboard where space is at a premium. • The clear, uncluttered display makes it easy for the driver to view route information

Mark scheme (award up to 6 marks) refer to the guidance on the cover of this document for how to apply levels-based mark schemes*.

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Level 0	0	No rewardable material.
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Level 2	3–4	<ul style="list-style-type: none"> • Demonstrates some accurate knowledge and understanding • There will be some gaps or omissions • Some of the points made will be relevant to the context in the question, but the link will not always be clear • Displays a partially developed discussion which considers some different aspects • There will be some consideration of how they interrelate
Level 3	5–6	<ul style="list-style-type: none"> • Demonstrates mostly accurate and detailed knowledge and understanding • There will be minor gaps or omissions • Most of the points made will be relevant to the context in the question, and there will be clear links • Displays a well-developed and logical discussion which clearly considers a range of different aspects • Clearly shows how they interrelate

Question Number	Answer
3d	<p>Answers will be credited according to the learner's demonstration of knowledge and understanding of the material, using the indicative content and level descriptors below. The indicative content that follows is not prescriptive. Answers may cover some/all of the indicative content but should be rewarded for other relevant answers.</p> <p>Learners discuss other factors that would enhance customer satisfaction when using the website.</p> <ul style="list-style-type: none"> • Ease of use <ul style="list-style-type: none"> ◦ navigation: buttons / menus / scrolling / hyperlinks ◦ data entry: prompts / validation / input masks ◦ layout: clear concise text / headings / subheadings / suitable/adequate images / positioning of menus ◦ interactivity: pop-ups / image rollovers / hot spots • Performance <ul style="list-style-type: none"> ◦ minimise 'lag' during navigation / after data entry • Accessibility <ul style="list-style-type: none"> ◦ colour schemes / contrast / styles ◦ text alternatives: image rollovers / alt text ◦ zoom facility ◦ compatible with assistive technologies ◦ screen reader • Compatibility <ul style="list-style-type: none"> ◦ different platforms e.g. PC/tablet ◦ different Operating Systems e.g. windows / IOS ◦ assistive technologies ◦ keyboards / touch screen • Content – include: <ul style="list-style-type: none"> ◦ Regularly maintained/updated ◦ personalisation features such as remembering delivery address, card details ◦ recommendations - 'customers who viewed this product also looked at.....' ◦ customer product reviews ◦ FAQs answered by customer ◦ Not too many adverts / personalised adverts ◦ adequate stock levels/products available for immediate delivery ◦ Support / chat feature • Payments <ul style="list-style-type: none"> ◦ ◦ ◦ Secure payments system / Uses encryption ◦ Personal details ◦ Choice of payment systems

Mark scheme (award up to 6 marks) refer to the guidance on the cover of this document for how to apply levels-based mark schemes*.

Level	Mark	Descriptor
Level 0	0	No rewardable material.
Level 1	1-2	<ul style="list-style-type: none"> • Demonstrates isolated elements of knowledge and understanding • There will be major gaps or omissions • Few of the points made will be relevant to the context in the question • Limited discussion which contains generic points • Little or no consideration of different aspects
Level 2	3-4	<ul style="list-style-type: none"> • Demonstrates some accurate knowledge and understanding • There will be some gaps or omissions • Some of the points made will be relevant to the context in the question, but the link will not always be clear • Displays a partially developed discussion which considers some different aspects • There will be some consideration of how they interrelate
Level 3	5-6	<ul style="list-style-type: none"> • Demonstrates mostly accurate and detailed knowledge and understanding • There will be minor gaps or omissions • Most of the points made will be relevant to the context in the question, and there will be clear links • Displays a well-developed and logical discussion which clearly considers a range of different aspects • Clearly shows how they interrelate

Question Number	Answer
4a	<p>Answers will be credited according to the learner's demonstration of knowledge and understanding of the material, using the indicative content and level descriptors below. The indicative content that follows is not prescriptive. Answers may cover some/all of the indicative content but should be rewarded for other relevant answers.</p> <p>Learners discuss how environmental concerns impact on the use of IT by individuals and organisations.</p> <p>Impact on individuals and organisations is very similar, however, the impact on individuals is in both the working environment and their use of personal devices / systems.</p> <p>Hardware Concern</p> <p>Individuals and organisations should consider how their Hardware is produced.</p> <ul style="list-style-type: none"> • Production of hardware uses large amounts of raw materials • Production of Hardware requires large amounts of energy in the manufacturing process. • The shipping of new hardware also uses raw materials e.g., packaging and energy. Both impact on natural (often diminishing) resources. <p>Solution</p> <p>Before purchasing/upgrading to new hardware both individuals and organisations should consider whether:</p> <ul style="list-style-type: none"> • the new hardware necessary, or is it purchased only because it is available, e.g., a new phone for an individual • is the cost to the environment worth the benefits to the individual / organisation • could the performance of current systems be improved by: <ul style="list-style-type: none"> ○ replacing 'elements' e.g. adding additional RAM to a PC / laptop (which would reduce the environmental impact) ○ purchasing improved software (which would have no environmental impact) <p>Energy consumption Concern</p> <p>Organisations use high levels of energy for the running of their business, this will have an impact on:</p> <ul style="list-style-type: none"> • financial impact from buying the Energy • Environmental impact through the release of greenhouse gases from the energy production process. <p>Solution</p> <ul style="list-style-type: none"> • individuals within an organisation must be encouraged to

- switch off devices at the end of the day
- switch devices to standby during working hours
- organisations can also use IT to reduce energy consumption by:
 - creating / using energy efficient air conditioning systems
 - Using Green energy e.g., solar panels, Wind
 - smart meters within the working environment
- organisations can encourage employees to create 'paperless environments'

Recycling

Concern

Environmental impact from the improper disposal of old hardware:

- may end up in landfill sites
- creates 'toxic' waste

Solution

When the decision has been made to upgrade the organisation must consider how to dispose of old hardware.

- can the 'whole' device be used by another individual / organisation e.g., phones can be passed on by an individual for use by a charity / sold to another user. Similarly, PCs may be passed to organisations in this country / developing countries
- can parts of the device be recycled e.g., RAM taken from one PC be used in another PC
- at a basic level material such as metals can be removed from devices and recycled
- Printer cartridges can be refilled/recycled

Working practices

Consider how Individuals and organisations can adapt their current working practices to reduce their environmental impact.

Solution -

Remote working / working from home has a positive effect on the environment as it reduces the need for travelling/commuting, reducing both energy consumption and pollution.

Modern day technologies (such as high-quality communication and security systems) are now well established, and organisations should consider whether it is feasible to set up systems which will allow employees work remotely. Individuals now have access to many portable devices which can be used effectively in these systems.

Organisations should also encourage individuals to reduce the use of consumables e.g., paper, printer cartridges and toner by introducing paperless environments e.g. not printing emails

Mark scheme (award up to 10 marks) refer to the guidance on the cover of this document for how to apply levels-based mark schemes*.

Level	Mark	Descriptor
Level 0	0	No rewardable material.
Level 1	1-4	<ul style="list-style-type: none"> • Demonstrates isolated elements of knowledge and understanding • There will be major gaps or omissions • Few of the points made will be relevant to the context in the question • Limited discussion which contains generic points • Little or no consideration of different aspects
Level 2	5-7	<ul style="list-style-type: none"> • Demonstrates some accurate knowledge and understanding • There will be some gaps or omissions • Some of the points made will be relevant to the context in the question, but the link will not always be clear • Displays a partially developed discussion which considers some different aspects • There will be some consideration of how they interrelate
Level 3	8-10	<ul style="list-style-type: none"> • Demonstrates mostly accurate and detailed knowledge and understanding • There will be minor gaps or omissions • Most of the points made will be relevant to the context in the question, and there will be clear links • Displays a well-developed and logical discussion which clearly considers a range of different aspects • Clearly shows how they interrelate

Question Number	Answer
4b	<p>Answers will be credited according to the learner's demonstration of knowledge and understanding of the material, using the indicative content and level descriptors below. The indicative content that follows is not prescriptive. Answers may cover some/all of the indicative content but should be rewarded for other relevant answers.</p> <p>Candidates assess the role of current legislation in protecting users and their data from attack and misuse.</p> <p>Learners are not expected to 'quote verbatim' any aspects of the legislation, but to demonstrate an understanding of why the legislation was put in place and the main principles.</p> <p>The learners may refer to the following legislation, however they should not be penalised for incorrect 'titles' and/or dates. Other relevant legislation should be credited.</p> <p>(1) Computer Misuse Act 1990 (2) Police and Justice Act 2006 (Computer Misuse) (3) Copyright Designs and Patents Act 1988 (4) The Copyright (Computer Programs) Regulations 1992 (5) Data Protection Act 1998 (6) Data Protection Act 2018 incorporating General Data Protection Regulation 2018</p> <p><u>Computer misuse / Police & Justice</u></p> <p>Set up to deal with hackers / unauthorised access to computers. i.e. those with the aim of stealing information or causing malicious damage.</p> <p>Illegal activities include unauthorised:</p> <ul style="list-style-type: none"> • access to computer material • access with intent to commit further offences • modification of computer material • making, supplying or obtaining material that could be used in computer misuse offences <p>Types of activity which are illegal include:</p> <ul style="list-style-type: none"> • using a user name/ password to log on to someone else's account / computer • phishing • introducing viruses / malware • creating virus / intentionally passing on a virus <p>These activities do not need to be 'successful'; it is the <i>intention</i> which is illegal.</p> <p>Organisations must:</p> <ul style="list-style-type: none"> • have procedures in place to control actions of internal users: <ul style="list-style-type: none"> ○ setting up password procedures to access accounts ○ file permissions ○ access levels • have procedures in place to monitor actions of internal users and take remedial actions • have procedures in place to control 'attack' from external forces e.g. firewall

- have recovery procedures in place in case of successful 'attack'

Individuals should be aware of possible threats and methods they can take to prevent threats/risks e.g. strong passwords / firewalls etc on individual devices etc

Copyright (3) & (4) above - (The Copyright (Computer Programs)) above is specific to computer software and was added later

Set up to protect the rights of the creators of materials (which may be literary, drama, art, musical works and software) to control how the material is used.

'Software' includes all kinds of technological works used on different platforms (tablets / PCs / phones etc) such as Apps / 'office' software / operating systems / virtual reality environments.

In terms of software it is illegal to:

- make a copy of the software to sell or give to someone else
- use software on a network without a licence

In terms of software it is legal to:

- make a backup copy of software or data for personal use

Copyright works can be used:

- for private study or research
- with permission from the owner
- with a licence
- if it is covered by 'fair use' exemptions

Users of copyright materials must acknowledge sources

Protection of data (DPA / GDPR) brings UK into line with European legislation

Impact on individuals:

- gives rights to individuals about how their data
 - is collected
 - processed / used
 - kept up to data / accurate
- gives rights on accessing data

Impact on organisations:

- must set up restrictions on how personal computer data can be used
- must take responsibility for complying with the principles of the acts
- must have processes and records in place to show compliance

General points

Organisations should include detailed guidelines for all legislation in their Acceptable Use Policy

Individuals within the organisation must be made aware of what the legislation entails, the steps they, as individuals, must take to adhere to the legislation and the consequences of not doing so (both internally and legally).

Mark scheme (award up to 8 marks) refer to the guidance on the cover of this document for how to apply levels-based mark schemes*.

Level	Mark	Descriptor
Level 0	0	No rewardable material.
Level 1	1–4	<ul style="list-style-type: none"> • Demonstrates isolated knowledge and understanding, there be major gaps or omissions • Few of the points made will be relevant to the context in the question • Limited assessment which contains generic assertions rather than considering the factors or events and their relative importance, leading to a conclusion which is superficial or unsupported
Level 2	5-8	<ul style="list-style-type: none"> • Demonstrates some accurate knowledge and understanding, with few minor omissions/any gaps or omissions are minor • Some of the points made will be relevant to the context in the question, but the link will not always be clear • Displays a partially developed assessment which considers some of the factors or events and their relative importance leading to a partially supported conclusion.
Level 3	9-12	<ul style="list-style-type: none"> • Demonstrates mostly accurate and thorough/detailed knowledge and understanding • Most of the points made will be relevant to the context in the question, and there will be clear links • Displays a well-developed and logical assessment which clearly considers the factors or events and their relative importance, leading to a supported conclusion

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